

MTS-3247US

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: T. Horiki : Art Unit:  
Serial No.: 09/824,397 : Examiner:  
Filed: April 2, 2001 :  
FOR: PORTABLE COMMUNICATION TERMINAL, :  
INFORMATION DISPLAY DEVICE, CONTROL :  
INPUT DEVICE AND CONTROL INPUT METHOD :

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents  
Washington, D.C. 20231

SIR:

Prior to examination, please amend the above-identified application as follows:

IN THE TITLE:

PORTABLE COMMUNICATIONS TERMINAL,  
INFORMATION DISPLAY DEVICE, CONTROL INPUT DEVICE AND  
CONTROL INPUT METHOD

IN THE DRAWINGS:

Please approve the correction to the drawing submitted in the enclosed red ink sketch under cover of a letter to the official draftsperson IN THE SPECIFICATION:

At page 5, lines 9-10:

One aspect of the present invention is a portable communications terminal comprising:

At page 5, lines 23-24:

Another aspect of the present invention is the portable communications terminal according to said present invention, further comprising an auxiliary display, mounted in said main body, for displaying at least textual information.

At page 6, lines 3-4:

Still another aspect of the present invention is the portable communications terminal according to said present invention, wherein said display part includes a first member where said display surface is provided, and a second member joined to said first member in an angularly movable fashion.

At page 6, lines 9-10:

Yet still another aspect of the present invention is the portable communications terminal according to said present invention, wherein an answer button is provided to answer an incoming call with the display surface of said display part covered by said main body.

At page 6, lines 14-15:

Still yet another aspect of the present invention is the portable communications terminal according to said present invention, wherein said joining part joins said display part to said main body in a detachable fashion.

At page 6, lines 18-19:

A further aspect of the present invention is an information display device comprising:

At page 7, lines 11-12:

A still further aspect of the present invention is the information display device according to said present invention, wherein the display surface of said display means is chosen to be equal in size to a region within which said imaging means captures said image, or to be smaller than said capture region.

At page 7, lines 17-18:

A yet further aspect of the present invention is the information display device according to said present invention, wherein said image processing means extracts a contour of said image, and

At page 7, lines 23-24:

A still yet further aspect of the present invention is the information display device according to said present invention, wherein said image processing means performs processing on portions of said image that are designated by a specific color and/or a specific temperature, and/or on portions of said image that lie within a focal length of said imaging means.

At page 8, lines 5-8:

An additional aspect of the present invention is the control input device comprising:

the information display device; and

At page 8, lines 11-12:

A still additional aspect of the present invention is the control input device according to said present invention, further comprising image pattern registering means in which are registered one or a plurality of image patterns associated with one or a plurality of said control inputs respectively, and wherein:

At page 8, lines 23-25:

A yet additional aspect of the present invention is the portable communications terminal comprising:  
control input device;

At page 9, lines 6-8:

A still yet additional aspect of the present invention is a portable communications terminal, further comprising a detection switch for detecting said main body being held by a user, said detection switch being mounted on said other main surface or a side face of said main body, and wherein:

At page 9, lines 16-17:

A supplementary aspect of the present invention is a portable communications terminal comprising:

At page 10, lines 5-6:

A still supplementary aspect of the present invention is the portable communications terminal according to said present invention, wherein said attitude detecting means detects the attitude of said main body by using a mercury switch.

At page 10, lines 10-11:

A yet supplementary aspect of the present invention is the portable communications terminal according to said present invention, wherein said orientation detecting means detects the attitude of said main body by using a gyro.

At page 10, lines 14-15:

A still yet supplementary aspect of the present invention is a control input method using a control input device, comprising the step of performing a prescribed gesture so as to be captured by said imaging means, wherein

At page 10, lines 21-25:

One aspect of the present invention is a program for causing a computer to function as all or part of the means of the information display device, said means consisting of imaging means of capturing an image, image processing means of processing the image captured by said imaging means, position detecting means of detecting from said processed image the position of said image on a screen, and display means of displaying prescribed information on a display surface.

At page 11, line 4:

Another aspect of the present invention is a program for causing a computer to function as all or part of the input means of the control input device, said input means carrying out a control input on an object pointed to by said pointer on said display surface.

At page 11, line 10:

Still another aspect of the present invention is a program for causing a computer to function as all or part of the means of the portable communications terminal, said means consisting of attitude detecting means of detecting the attitude of said main body, and display orientation switching means of switching the orientation of said image displayed on said display part, based on a detection result output from said attitude detecting means.

At page 16, line 16:

When using the portable telephone 100, the user puts his ear on the speaker 112 with the hinged part 130 opened to expose the display screen 121 in the same manner as with the conventional collapsible portable telephone, and holds the main body 110 in his palm with his fingers other than the forefinger. In this condition, the display screen 121 that the user is viewing can be stably held in position even in situations where vibrations tend to be applied to the portable telephone 100, for example, when the user is walking about.

At page 17, line 5:

When the user uses the portable telephone 100 to connect to a network such as the Internet and have information such as a Web page displayed, the user opens the hinged part 130 to expose the display screen 121 in the same manner as with a conventional collapsible portable telephone, as shown in Figures 1(a) and 1(b), and with the speaker 112 lightly pressed on his ear, firmly holds the portable telephone 100 by supporting the back of the input part 114 with the palm of his right or left hand and putting his thumb on one side of the main body 110 and his fingers other than the forefinger on the other side thereof. In this condition, the user's eye is positioned to look into the display surface 121 so that he can view the screen of the projection micro-display.

At page 21, lines 4-5:

The pointing device 115 may be mounted in any suitable position on the main surface opposite from the main surface where the speaker 112 is mounted. For example, it may be mounted in a position directly opposite the position of the speaker 112, or in a position nearer to the hinged part 130 than to the speaker 112 or farther from the hinged part 130. It may also be mounted in a position near the left or right edge of the main body 110.

At page 26, line 14:

Figure 9(a) shows one example of the hand pattern that the portable communications terminal of this embodiment recognizes. This example shows a forefinger 901 being stuck out (pattern A), and the area surrounding the fingertip is displayed in an overlay region 902 on the display surface 900 of the liquid crystal display 621.

At page 27, line 21:

Next, in the control means 703, the tip position detected by the position detecting means 702 is set as a overlay region, which is then displayed on the liquid crystal display 621 by being overlaid on the display surface being shot with the CCD camera 611.

At page 29, line 11:

When the user moves his hand from left to right while keeping the hand pattern B as shown in Figure 10(c), the overlay region 902 as a cursor displayed on the display surface 900 of the liquid crystal display 621 is dragged to move the object 1002 in the rightward direction across the GUI screen displayed in overlaying fashion on the display surface 900 of the liquid crystal display 621, as shown in Figure 9(old).

IN THE CLAIMS:

Please replace claim 13 as follows:

1               13. (Amended) A portable communications terminal  
2 according to claim 1 or 9, further comprising a detection switch for detecting  
3 said main body being held by a user, said detection switch being mounted on  
4 said other main surface or a side face of said main body, and wherein:

5               said display part is activated when said detection switch detects  
6 said main body being held by a user, and

7               said display part is deactivated when said detection switch no  
8 longer detects said main body being held.

Respectfully Submitted,

Allan Ratner, Reg. No. 19,717  
Attorney for Applicant

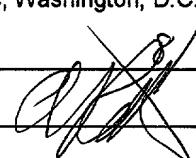
AR/ap

Dated: August 1, 2001

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## VERSION WITH MARKINGS TO SHOW CHANGES MADE

TITLE:

PORTABLE COMMUNICATIONS TERMINAL, INFORMATION DISPLAY DEVICE, CONTROL INPUT DEVICE AND CONTROL INPUT METHOD

SPECIFICATION:

At page 5, lines 9-10:

[The 1st invention] One aspect of the present invention[(corresponding to claim 1)] is a portable communications terminal comprising:

At page 5, lines 23-24:

[The 2nd invention] Another aspect of the present invention[(corresponding to claim 2)] is the portable communications terminal according to said present invention, further comprising an auxiliary display, mounted in said main body, for displaying at least textual information.

At page 6, lines 3-4:

[The 3rd invention] Still another aspect of the present invention[(corresponding to claim 3)] is the portable communications terminal according to said present invention, wherein said display part includes a first member where said display surface is provided, and a second member joined to said first member in an angularly movable fashion.

At page 6, lines 9-10:

[The 4th invention] Yet still another aspect of the present invention[(corresponding to claim 4)] is the portable communications terminal according to said present invention, wherein an answer button is provided to answer an incoming call with the display surface of said display part covered by said main body.

At page 6, lines 14-15:

[The 5th invention] Still yet another aspect of the present invention[(corresponding to claim 5)] is the portable communications terminal

according to said present invention, wherein said joining part joins said display part to said main body in a detachable fashion.

At page 6, lines 18-19:

[The 6th invention] A further aspect of the present invention[(corresponding to claim 6)] is an information display device comprising:

At page 7, lines 11-12:

[The 7th invention] A still further aspect of the present invention[(corresponding to claim 7)] is the information display device according to said present invention, wherein the display surface of said display means is chosen to be equal in size to a region within which said imaging means captures said image, or to be smaller than said capture region.

At page 7, lines 17-18:

[The 8th invention] A yet further aspect of the present invention[(corresponding to claim 8)] is the information display device according to said present invention, wherein said image processing means extracts a contour of said image, and

At page 7, lines 23-24:

[The 9th invention] A still yet further aspect of the present invention[(corresponding to claim 9)] is the information display device according to said present invention, wherein said image processing means performs processing on portions of said image that are designated by a specific color and/or a specific temperature, and/or on portions of said image that lie within a focal length of said imaging means.

At page 8, lines 5-8:

[The 10th invention] An additional aspect of the present invention[(corresponding to claim 10)] is the control input device comprising:  
the information display device [according to any one of 6th to 9th inventions]; and

At page 8, lines 11-12:

[The 11th invention] A still additional aspect of the present invention[(corresponding to claim 11)] is the control input device according to

said present invention, further comprising image pattern registering means in which are registered one or a plurality of image patterns associated with one or a plurality of said control inputs respectively, and wherein:

At page 8, lines 23-25:

[The 12th invention] A yet additional aspect of the present invention[(corresponding to claim 12)] is the portable communications terminal comprising:

control input device [according to 10th invention];

At page 9, lines 6-8:

[The 13th invention] A still yet additional aspect of the present invention[(corresponding to claim 13)] is a portable communications terminal [according to 1st or 12th inventions], further comprising a detection switch for detecting said main body being held by a user, said detection switch being mounted on said other main surface or a side face of said main body, and wherein:

At page 9, lines 16-17:

[The 14th invention] A supplementary aspect of the present invention[(corresponding to claim 14)] is a portable communications terminal comprising:

At page 10, lines 5-6:

[The 15th invention] A still supplementary aspect of the present invention[(corresponding to claim 15)] is the portable communications terminal according to said present invention, wherein said attitude detecting means detects the attitude of said main body by using a mercury switch.

At page 10, lines 10-11:

[The 16th invention] A yet supplementary aspect of the present invention[(corresponding to claim 16)] is the portable communications terminal according to said present invention, wherein said orientation detecting means detects the attitude of said main body by using a gyro.

At page 10, lines 14-15:

[The 17th invention] A still yet supplementary aspect of the present invention[(corresponding to claim 17)] is a control input method using a control input device [according to 11th invention], comprising the step of performing a prescribed gesture so as to be captured by said imaging means, wherein

At page 10, lines 21-25:

[The 18th invention] One aspect of the present invention[(corresponding to claim 18)] is a program for causing a computer to function as all or part of the means of the information display device [described in 6th invention], said means consisting of imaging means of capturing an image, image processing means of processing the image captured by said imaging means, position detecting means of detecting from said processed image the position of said image on a screen, and display means of displaying prescribed information on a display surface.

At page 11, line 4:

[The 19th invention] Another aspect of the present invention[(corresponding to claim 19)] is a program for causing a computer to function as all or part of the input means of the control input device [described in 10th invention], said input means carrying out a control input on an object pointed to by said pointer on said display surface.

At page 11, line 10:

[The 20th invention] Still another aspect of the present invention[(corresponding to claim 20)] is a program for causing a computer to function as all or part of the means of the portable communications terminal [described in 14th invention], said means consisting of attitude detecting means of detecting the attitude of said main body, and display orientation switching means of switching the orientation of said image displayed on said display part, based on a detection result output from said attitude detecting means.

At page 16, line 16:

When using the portable telephone 100, the user puts his ear on the speaker 112 with the hinged part 130 [5]opened to expose the display screen 121 in the same manner as with the conventional collapsible portable telephone, and holds the main body 110 in his palm with his fingers other than the forefinger. In this condition, the display screen 121 that the user is viewing can be stably held in position even in situations where vibrations tend to be applied to the portable telephone 100, for example, when the user is walking about.

At page 17, line 5:

When the user uses the portable telephone 100 to connect to a network such as the Internet and have information such as a Web page displayed, the user opens the hinged part 130 to expose the display screen 121 in the same manner as with a conventional collapsible portable telephone, as shown in Figures 1(a) and 1(b), and with the speaker 112 lightly pressed on his ear, firmly holds the portable telephone 100 by supporting the back of the input part 114 with the palm of his right or left hand and putting his thumb on one side of the main body 110 and his fingers other than the forefinger on the other side thereof. In this condition, the user's eye is positioned to look into the display surface 121 so that he can view the screen of the projection micro-display.

At page 21, lines 4-5:

The pointing device 115 may be mounted in any suitable position on the main surface opposite from the main surface where the speaker 112 is mounted. For example, it may be mounted in a position directly opposite the position of the speaker [122] 112, or in a position nearer to the hinged part 130 than to the speaker [122] 112 or farther from the hinged part 130. It may also be mounted in a position near the left or right edge of the main body 110.

At page 26, line 14:

Figure 9(a) [(b)] shows one example of the hand pattern that the portable communications terminal of this embodiment recognizes. This example shows a forefinger 901 being stuck out (pattern A), and the area surrounding the fingertip is displayed in an overlay region 902 on the display surface 900 of the liquid crystal display 621.

At page 27, line 21:

Next, in the control means 703, the tip position detected by the position detecting means 702 is set as a overlay region, which is then displayed on the liquid crystal display 621 by being overlaid on the display surface being shot with the CCD camera 611.

At page 29, line 11:

When the user moves his hand from left to right while keeping the hand pattern B as shown in Figure [9] 10(c), the overlay region 902 as a cursor displayed on the display surface 900 of the liquid crystal display 621 is dragged to

move the object 1002 in the rightward direction across the GUI screen displayed in overlaying fashion on the display surface 900 of the liquid crystal display 621, as shown in Figure 9(old).

CLAIMS:

13. (Amended) A portable communications terminal according to claim 1 or [12] 9, further comprising a detection switch for detecting said main body being held by a user, said detection switch being mounted on said other main surface or a side face of said main body, and wherein:

said display part is activated when said detection switch detects said main body being held by a user, and

said display part is deactivated when said detection switch no longer detects said main body being held.

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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AUG 02 2001  
O I P E  
U.S. PATENT & TRADEMARK OFFICE  
Applicant: T. Horiki : Art Unit:  
Serial No.: 09/824,397 : Examiner:  
Filed: April 2, 2001 :  
FOR: PORTABLE COMMUNICATION TERMINAL,  
INFORMATION DISPLAY DEVICE, CONTROL :  
INPUT DEVICE AND CONTROL INPUT METHOD :  
:

LETTER

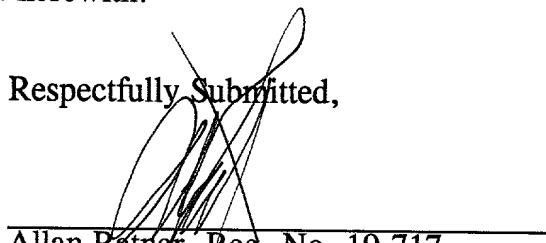
Assistant Commissioner for Patents  
Washington, D.C. 20231

Attention: Official Draftsperson

SIR :

Subject to approval by the Examiner in charge of the above-identified application, please enter the correction to the drawing as shown in the red inked sketch submitted herewith.

Respectfully Submitted,

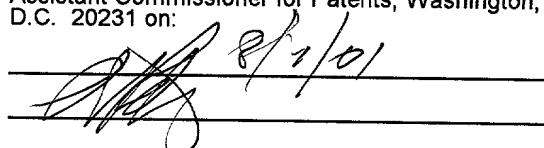
  
Allan Ratner, Reg. No. 19,717  
Attorney for Applicant

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Enclosure:  
Dated: August 1, 2001

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